

Resembles *B. unguiculata*, HEDW., but differs in its shorter more oblong not linguulate leaves, with the ordinary cells not granulose, the basal ones less pellucid etc. Costa minutely papillose on the back.

BARBULA? *WOLLEI*, *n. sp.*—Plantae dense caespitosae, subfragiles, saturate virides; caule erecto subsimplici, foliis siccitate subcrispatis nudifactis flexuoso-patentibus sublinearibus apice canaliculato excepto planiusculis paulo undulatis margine planis minutissime eroso-serratis apice subacuminato-acutatis, costa percurrente haud lutescente: flores et fructu ignoti. (An *Trichostomii* vel *Didymodontis* species.?)

Rocks in a ravine, near Bethlehem, Pennsylvania, *Rav.*

Intermediate in many respects between *Barbula caespitosa* and *Didymodon cylindricus*. From the former it differs in its longer stems, rather broader less carinate less undulate and more fragile leaves, minutely erose-serrate on the margin, sub-acuminate by the incurved margins at the apex, rather less pellucid at the base, and with the costa neither pellucid when moist nor shining on the back when dry. From the latter it differs in its twice larger size, broader, less fragile acuminate erose-serrate leaves, etc.

TRICHOSTOMUM COLORADENSE, *n. sp.*—Plante pusillae fusco-virides; caule tenui subflexuoso 2-3 lineas longo, foliis inferioribus remotiusculis superioribus congestis patulo-incurvis linealibus toto longitudine valde convolutis acutiusculis minutissime granuloso-papillosis obscure minute areolatis, basi subpellucida, margine plana integerrima tenui, apice extremo subpellucido nonnullo minute serrato, costa basi lata deplanata tenuissima supra medium vix a lamina distinguenda longe ante apicem evanida: caetera desunt.

Yosemite Valley. Communicated by *Mr. James*.

This species is well distinguished from all others of the genus known to me by its long linear convolute leaves plane on the margin and incurved towards the apex, and with a remarkably thin costa which is not at all prominent on the back. The cells at the base of the leaf are very small narrow and pellucid, soon passing into quadrate, and then into granular above.

SOME NOTES ON VARIATIONS.—*Liatris scariosa*, *L.*, found in 1873-4 around Grand Rapids, Mich., frequently had as many as 80 heads on a spike, heads often as many as 60-flowered. *Liatris squarrosa*, *Willd.*, often had the remarkable number of from 70 to 92 florets in a head. *L. squarrosa*, *L. cylindrica*, *L. scariosa*, and *L. pycnostachya*, almost always presented the characters of pubescent achenia, and punctate leaves and scales. But the most remarkable *Liatris* was one that seemed to be intermediate between *L. scariosa*, and *L. squarrosa*, found south of the city along side of the Grand River Valley R. R. Heads of flowers usually large, and the upper ones—very seldom the lower—had colored scales, much longer than the florets, intermixed with them. Sometimes there would be twelve or fifteen of these scales; often not more than five or six. Otherwise the receptacle was smooth. Have never seen this feature in any other locality, nor heard of it anywhere.

Another singular variation noticed was in the *Ranunculus multifidus*, Pursh [*R. Purshii*, Rich.]. It very often occurred, in the numerous ponds around Grand Rapids, with double and quilled flowers and often with the scales changed to tubular appendages, with an entire, or lacerate border. The flowers were very large for the species, and the leaves sometimes very much dissected, sometimes with but few divisions. On one occasion I came upon a patch—or field—of some two acres nearly covered with the bright golden flowers. I could see them for a long distance before I reached them, and when I reached the border of what I afterwards found was a drained pond I was much surprised as well as interested to find all the plants growing in the moist soil with leaves not more divided than in *R. bulbosus*, and stems from five to ten or twelve inches high, and both leaves and stems pubescent. There were two or three low places

where water was still standing, and in these the lower leaves presented the usual dissected appearance.

I also found *Flaëkia proserpinacoides*, Willd., growing in moist soil, at some distance from any water. Apparently the ground was kept moist by the thick trees.

During the autumn of '73 I frequently found *Viola Canadensis*, L., and *V. rostrata*, Pursh., with apetalous flowers and large full capsules, and occasionally *V. Muhlenbergii*, Torr., presented this feature. I do not refer to subterranean apetalous flowers, but those growing upon the stems. Many species have the subterranean capsules. Since I came to Connecticut I have found *Viola sagittata*, Ait., and *V. lanceolata*, L., with the character described above, that is with apetalous flowers, both subterranean and on scapes.

Found one *Trillium grandiflorum*, Salisb., with four leaves, four petals, four sepals, four stamens, two stigmas, ovary four angled and one edge each of two opposite petals curled as if they had partially absorbed the two missing stamens. Once I found a *Trillium erythrocarpum*, var. *Clevelandicum*, Wood., with six sepals and fifteen petals all green.

Oct., 25, 1873, I found a *Salix* in fruit, which was well ripened, and some of it falling from the scales. The leaves were mostly fallen, and what remained were so blackened by the frost that the species could not be determined with certainty. They resembled those of *S. lucida*. The question in regard to it was, is this the second fruiting of the season?

In the spring of '73 I found a field of more than two acres covered with the flower of *Valeriana sylvatica*, L. The next spring scarce a blossom could be found in this field, and this was the only field then seen that produced them. A few were afterwards found in another field. What caused their disappearance? Near by was an abundance of *Cypripedium spectabile*, Swartz., and the finest specimens I ever saw. The next year not a flower could be found in the locality, and only one plant, a half starved specimen with two leaves. Why this change? I think that if a reason could be found for these disappearances, it would throw light on the question of veracity which has arisen in regard to the statements of some writers, who having said they had found certain flowers in a certain location, have been judged to be mistaken, because others could never find those flowers in the same localities.

The *Arctostaphylos Uva-ursi*, Spreng., sometimes occurs in Michigan with leaves ciliate on the margin, petioles pubescent, stamens pubescent, and young branches quite so.—N. COLEMAN, *Bloomfield, Conn.*

FOREIGN PLANTS IN NORTHERN CALIFORNIA.—At the time of the publication of the Bot. Cal., Vol. I, last spring, *Verbascum Thapsus*, L., was "yet unknown on the Pacific coast." But I find it well established and apparently spreading too rapidly at several localities in the interior of the extreme northern portion of the State.

In an old field near Yreka, Siskiyou county, there grows a great quantity of another foreigner, and one which has not often been recorded as established, or even adventive in North America, namely, *Lepidium Draba*, L., of Europe. *Datura Tatula*, L., is here first recorded from California. It occurs plentifully by the roadside, at Callahan's Ranch, Siskiyou county.—EDW D L. GREENE, *Yreka, Cal.*

ROOT-LEAVES OF ALISMA PLANTAGO, VAR. AMERICANUM, Gray.—While on a botanizing tour near New Harmony, Ind., last May, I came to a small pond in which the water was gradually drying up. On approaching the border I found what was then a plant from 2-4 inches high, which was just beginning to bud, and in some plants flowers were partially opened. A more thorough examination proved that these plants were not found within 4-5 ft. of the water's edge, but from this on to several feet. Under the water, the muddy surface was covered by tufts of a grassy looking plant, the thin membranous leaves (*phyllodia*?) of which were linear-lanceolate, from 2-5 inches long, from $\frac{1}{8}$ - $\frac{1}{4}$ inch broad. Turning my attention now to the plants first found I discov-